Ballisticlean™ Centerfire Rifle & Pistol Ammunition

Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 08/24/2018

SECTION 1: IDENTIFICATION

Product Identifier
Product Form: Article
Product Name: Ballisticlean™ Centerfire Rifle & Pistol Ammunition (all calibers)
Synonyms: BC9NT3, BC40P1, BC45CT1, BC223NT5, SP223, BC223NT5A, BC556NT1, XM556NT1, all other Lead Free Rifle/Pistol Ammunition part numbers. Previous SDS# F3004, F3005, F3006, F3007, F3008, F3010

Intended Use of the Product
Small arms ammunition, Sporting Ammunition

Name, Address, and Telephone of the Responsible Party
Company
Federal Cartridge Company
900 Ehlen Drive
Anoka, Minnesota 55303
T 1-800-635-7656
dangerous.goods@vistaoutdoor.com

Emergency Telephone Number
Emergency number: 1-800-424-9300 (Inside US), 01-703-527-3887 (Outside US) - (CHEMTREC, Day or Night)
(Transportation Incidents Only)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)
Physical Hazards: Explosives Division 1.4S
Health Hazards: Acute Toxicity (inhilation) Category 4
Skin Sensitization Category 1A
Specific Target Organ Toxicity, Repeat Exposure Category 2

Label Elements
GHS-US Labeling

Hazard Pictograms (GHS-US):

Signal Word (GHS-US):
WARNING

Hazard Statements (GHS-US):
Fire or projection hazard. Harmful if inhaled. May cause an allergic skin reaction. May cause damage to respiratory system through prolonged or repeated exposure.

Precautionary Statements (GHS-US)
Prevention:
Do not handle until all safety precautions have been read and understood. Keep away from heat. No smoking. Do not subject to shock. Wear eye protection. Do not breath dust/fume. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Wash hands thoroughly after handling.
Response:
In case of fire: Evacuate area. Fight fire with normal precautions from a reasonable distance. If exposed, concerned or you feel unwell: Call a doctor or get medical attention.
Storage: Store in accordance with applicable fire codes. Keep only in original packaging.
Disposal: Dispose of ammunition in accordance with local regulations.
Supplemental information: The hazardous components of this product are encased and are not biologically available. Therefore, some health hazards do not apply to the overall...
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS
Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>% (w/w)</th>
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<tbody>
<tr>
<td>Tin</td>
<td>(CAS No) 7440-31-5</td>
<td>0 – 60</td>
</tr>
<tr>
<td>Copper</td>
<td>(CAS No) 7440-50-8</td>
<td>30 – 55</td>
</tr>
<tr>
<td>Nickel**</td>
<td>(CAS No) 7440-02-0</td>
<td>0 – 1</td>
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<td>Zinc</td>
<td>(CAS No) 7440-66-6</td>
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<tr>
<td>Nitrocellulose*</td>
<td>(CAS No) 9004-70-0</td>
<td>1 – 5</td>
</tr>
<tr>
<td>Nitroglycerin*</td>
<td>(CAS No) 55-63-0</td>
<td>0 – 5</td>
</tr>
<tr>
<td>Diazodinitrophenol*</td>
<td>(CAS No) 4682-03-5</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Barium</td>
<td>(CAS No) 7440-39-3</td>
<td>&lt; 0.1</td>
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</table>

*The hazardous components of this product are encased within a shell and are unlikely to be released under normal handling conditions. Therefore, the health and environmental hazards associated with nitrocellulose and nitroglycerin do not apply to the product overall.

**It is suspected that nickel causes cancer and damage to the respiratory tract via inhalation. Because this product is in massive form, it is unlikely that respiration is a potential route of exposure. Therefore, the hazards usually associated with nickel do not apply to this product.

More than one of the ranges of concentration prescribed by Controlled Products Regulations has been used where necessary due to varying composition.

Full text of H-phrases: see section 16

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: When symptoms occur: go into open air and ventilate suspected area.

Skin Contact: Wash with plenty of soap and water. If skin irritation or rash occurs: Seek medical advice.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: Rinse mouth. Do NOT induce vomiting.

Most Important Symptoms and Effects Both Acute and Delayed

General: Projectiles from fired ammunition can cause puncture wounds.

Inhalation: Not expected to be a primary route of exposure.

Skin Contact: None expected under normal conditions of use.

Eye Contact: None expected under normal conditions of use.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None expected under normal conditions of use.

Indication of Any Immediate Medical Attention and Special Treatment Needed
If you feel unwell, seek medical advice (show the label where possible).

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Straight water stream; Water fog. Class A foam.

Unsuitable Extinguishing Media: None

Special Extinguishing Media: None

Fire Hazard: Not considered flammable but may burn at high temperatures.
Advice for Firefighters

Precautionary Measures Fire: Do not breathe fumes from fires or vapors from decomposition. Exercise caution when fighting any chemical fire. If product is unconfined, there is a greater risk for injury from projectiles.

Firefighting Instructions: In case of fire: Evacuate area. Use water spray or fog for cooling exposed containers.

Protection During Firefighting: Self-contained breathing apparatus (SCBA) and full structural protective clothing should be worn for any fire or exposure to heat. This includes, but is not limited to, protective coat, pants, boots, firefighting gloves, SCBA with facepiece and helmet, protective hood and eye protection. (NFPA 1971)


Specific Methods:
Perform a risk assessment before engaging in offensive firefighting operations. Unless life safety risk or significant risk of property loss is present, consider taking defensive posture, protecting exposures and maintaining safe distance until material is consumed. For further information see the video “Ammunition and the Fire Fighter” by the Sporting Arms and Ammunition Manufacturers’ Institute (SAAMI).

Evacuate personnel to a safe area according to predetermined public protection zones. Refer to pre-incident response and structural plans to determine potential for involvement of other hazardous materials. Direct water streams at product to reduce projectile hazard from exploding cartridges. After the fire is controlled, heated products can still re-ignite and project pieces of metal posing risk to fire-fighters. Full PPE including respiratory protection should be worn during salvage, overhaul and fire investigation. Do not disturb the involved area until the fire is completely extinguished and the product and packaging are allowed to cool down to ambient temperatures.

Reference to Other Sections
Refer to section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all unnecessary exposure.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).


For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Eliminate ignition sources.

Environmental Precautions

Avoid release to the environment.

Methods and Material for Containment and Cleaning Up

For Containment: Dry sweeping can contain spilled product. Use only non-sparking tools.

Methods for Cleaning Up: Clear up spills immediately and dispose of waste safely.

Reference to Other Sections
See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Precautions for Safe Handling: Projectiles from fired ammunition can cause puncture wounds. Avoid striking the primer of unchambered cartridges. Remove ammunition from service if any of the following conditions have occurred: corrosion, physical damage, exposure to oil or spray type lubricants.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Conditions for Safe Storage, Including Any Incompatibilities

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**Storage Conditions:** Store in a dry, cool and well-ventilated place. Keep/Store away from heat sources, ignition sources, and incompatible materials. Keep container closed when not in use.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

**Special Rules on Packaging:** Keep only in original container.

**Specific End Use(s)**
Small arms ammunition.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control Parameters

<table>
<thead>
<tr>
<th></th>
<th>OEL TWA (mg/m³)</th>
<th>OEL STEL (mg/m³)</th>
<th>OEL TWA (ppm)</th>
<th>OEL STEL (ppm)</th>
<th>OEL TWA (ppm)</th>
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<td>Yukon</td>
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</table>

| **Nitroglycerin (55-63-0)** |                |                 |               |                |               |                |               |                |               |                |
| Mexico         | OEL TWA (mg/m³) | 0.5 mg/m³       | Mexico        | OEL TWA (ppm) | 0.05 ppm | Mexico | OEL STEL (mg/m³) | 1 mg/m³ | Mexico | OEL STEL (ppm) | 0.1 ppm |
| Mexico         | OEL STEL (mg/m³) | 1 mg/m³        | USA ACGIH      | ACGIH TWA (ppm) | 0.05 ppm | USA OSHA OSHA PEL (Ceiling) (mg/m³) | 2 mg/m³ | USA IDLH US IDLH (mg/m³) | 75 mg/m³ | USA IDLH US IDLH (mg/m³) | 75 mg/m³ |
| USA OSHA       | OSHA PEL (Ceiling) (mg/m³) | 2 mg/m³ | USA OSHA | OSHA PEL (Ceiling) (ppm) | 0.2 ppm | USA NIOSH NIOSH REL (STEL) (mg/m³) | 0.1 mg/m³ | USA IDLH US IDLH (mg/m³) | 75 mg/m³ | USA IDLH US IDLH (mg/m³) | 75 mg/m³ |
| USA NIOSH      | OSHA PEL (Ceiling) (ppm) | 0.2 ppm | USA IDLH | US IDLH (mg/m³) | 75 mg/m³ | Alberta | OEL TWA (mg/m³) | 0.5 mg/m³ | Alberta | OEL TWA (ppm) | 0.05 ppm |
| Alberta        | OEL TWA (ppm) | 0.05 ppm       | British Columbia | OEL TWA (ppm) | 0.05 ppm | Manitoba | OEL TWA (ppm) | 0.05 ppm | New Brunswick | OEL TWA (ppm) | 0.05 ppm |
| New Brunswick  | OEL TWA (ppm) | 0.05 ppm       | New Brunswick | OEL TWA (ppm) | 0.05 ppm | New Brunswick | OEL TWA (ppm) | 0.05 ppm | New Brunswick | OEL TWA (ppm) | 0.05 ppm |
| Newfoundland & Labrador | OEL TWA (ppm) | 0.05 ppm | Nova Scotia | OEL TWA (ppm) | 0.05 ppm | Nunavut | OEL STEL (mg/m³) | 0.46 mg/m³ | Nunavut | OEL STEL (mg/m³) | 0.46 mg/m³ |
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<table>
<thead>
<tr>
<th>Region</th>
<th>OEL STEL (ppm)</th>
<th>OEL TWA (mg/m³)</th>
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<td>Yukon</td>
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</table>

**Exposure Controls**

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Gloves. Safety glasses.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** In case of projectile hazard: Safety glasses. Face shield.

**Skin and Body Protection:** Wash contaminated clothing before reuse.

**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Environmental Exposure Controls:** Do not allow the product to be released into the environment.

**Consumer Exposure Controls:** Do not eat, drink or smoke during use. If noise levels exceed OSHA limits while firing this product, use hearing protection in accordance with OSHA's Hearing Conservation Standard, 29 CFR 1910.95.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**Information on Basic Physical and Chemical Properties**

- **Physical State:** Solid
- **Appearance:** Not available
- **Odor:** Not available
- **Odor Threshold:** Not available
- **pH:** Not available
- **Evaporation Rate:** Not available
- **Melting Point:** Not available
- **Freezing Point:** Not available
- **Boiling Point:** Not available
- **Flash Point:** Not available
- **Auto-ignition Temperature:** Not available
- **Decomposition Temperature:** Not available
- **Flammability (solid, gas):** Not available
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<table>
<thead>
<tr>
<th>Property</th>
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<tr>
<td>Vapor Pressure</td>
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<td>Relative Vapor Density at 20 °C</td>
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<tr>
<td>Specific Gravity</td>
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<tr>
<td>Solubility</td>
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<tr>
<td>Partition coefficient: n-octanol/water</td>
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<tr>
<td>Viscosity</td>
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<td>Explosive properties</td>
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<td>Explosion Data – Sensitivity to Mechanical Impact</td>
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<tr>
<td>Explosion Data – Sensitivity to Static Discharge</td>
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</table>

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Hazardous reactions are unlikely to occur under normal circumstances.
Chemical Stability: Stable under recommended handling and storage conditions (see section 7). However, because of the design of ammunition and its components, partial detonation upon impact or intense heat may occur. Mass detonation will not occur.
Possibility of Hazardous Reactions: Hazardous polymerization will not occur.
Hazardous Decomposition Products: Metal oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product
Acute Toxicity: Not classified

| LD50 and LC50 Data: Small Arms Ammunition – Ballisticlean Rifle & Pistol Ammunition |
|---------------------------------|-----------------------------------------------------------------------------------|
| ATE US (oral)                   | 100.00 mg/kg body weight                                                         |
| ATE US (dermal)                 | 300.00 mg/kg body weight                                                         |
| ATE US (dust, mist)             | 0.50 mg/l/4h                                                                     |

Skin Corrosion/Irritation: Not classified
Serious Eye Damage/Irritation: Not classified
Respiratory or Skin Sensitization: May cause an allergic skin reaction.
Germ Cell Mutagenicity: Not classified
Teratogenicity: Not classified
Carcinogenicity: Reasonably anticipated to be human carcinogen.
Specific Target Organ Toxicity (Repeated Exposure): Not classified
Reproductive Toxicity: Not classified
Specific Target Organ Toxicity (Single Exposure): Not classified
Aspiration Hazard: Not classified
Symptoms/Injuries After Inhalation: Not expected to be a primary route of exposure.
Symptoms/Injuries After Skin Contact: May cause an allergic skin reaction.
Symptoms/Injuries After Eye Contact: None expected under normal conditions of use.
Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.
Chronic Symptoms: None expected under normal conditions of use.

Information on Toxicological Effects - Ingredient(s)
LD50 and LC50 Data:

<table>
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<tr>
<th>Nitrocellulose (9004-70-0)</th>
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<tbody>
<tr>
<td>LD50 Oral Rat</td>
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</table>
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<table>
<thead>
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<th>LD50 Oral Rat</th>
<th>105 mg/kg</th>
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</thead>
<tbody>
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<td>LD50 Dermal Rabbit</td>
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<td>ATE (dust, mist)</td>
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SECTION 12: ECOLOGICAL INFORMATION

Toxicity  Not classified

Nitroglycerin (55-63-0)

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<tr>
<th>LC50 Fish 1</th>
<th>0.87 - 3.25 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [flow-through])</th>
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<td>LC 50 Fish 2</td>
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<tr>
<td>EC50 Daphnia 2</td>
<td>38 - 55 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])</td>
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Persistence and Degradability

Copper (7440-50-8)

Persistence and Degradability  Not readily biodegradable.

Bioaccumulative Potential  Not available

Mobility in Soil  Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Recommendations: Destroy and dispose of in accordance with applicable local, state, provincial, territorial, federal and international regulations. Comply with regulations as defined in the Explosives Act of Canada and the provisions of the Bureau of Alcohol, Tobacco and Firearms regulations contained in 27 CFR part 555.

SECTION 14: TRANSPORT INFORMATION

14.1 In Accordance with DOT

Proper Shipping Name  CARTRIDGES, SMALL ARMS
Hazard Class  1.4S
Identification Number  UN0012
Label Codes  1.4S

14.1.1 Domestic Ground packaged per 49CFR173.63

Proper Shipping Name  None
Hazard Class  Limited Quantity
Identification Number  None
Label Codes  None
Packing Group  None

14.2 In Accordance with IMDG

Proper Shipping Name  CARTRIDGES FOR WEAPONS, INERT PROJECTILE
Hazard Class  1.4S
Identification Number  UN0012
Label Codes  1.4S
EmS-No. (Fire)  F-B
EmS-No. (Spillage)  S-X

14.3 In Accordance with IATA

Proper Shipping Name  Check with air carrier for latest regulation
Identification Number  
Hazard Class  
Label Codes  
ERG Code (IATA)  

14.4 In Accordance with TDG

Proper Shipping Name  CARTRIDGES, SMALL ARMS
Ballisticlean™ Centerfire Rifle & Pistol Ammunition
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

| Hazard Class | 1.4S |
| Identification Number | UN0012 |
| Label Codes | 1.4S |

Per 49CFR173.63(b): Limited quantities of Cartridges, small arms, Cartridges, power device, Cartridges for tools, blank, and Cases, cartridge, empty with primer. (1)(i) Cartridges, small arms, Cartridges, power device (used to project fastening devices), Cartridges for tools, blank, and Cases, cartridge, empty with primer that have been classed as Division 1.4S explosive may be offered for transportation and transported as limited quantities when packaged in accordance with paragraph (b)(2) of this section. Packages containing such articles may be marked with either the marking prescribed in §172.315(a) or (b) of this subchapter and offered for transportation and transported by any mode. For transportation by aircraft, the package must conform to the applicable requirements of §173.27 of this part. In addition, packages containing such articles offered for transportation by aircraft must be marked with the proper shipping name as prescribed in the §172.101 Hazardous Materials Table of this subchapter. Packages containing such articles are not subject to the shipping paper requirements of subpart C of part 172 of this subchapter unless the material meets the definition of a hazardous substance, hazardous waste, marine pollutant, or is offered for transportation and transported by aircraft or vessel. Additionally, packages containing such articles are excepted from the requirements of subparts E (Labeling) and F (Placarding) of part 172 of this subchapter.

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Small Arms Ammunition – Ballisticlean Rifle & Pistol Ammunition

| SARA Section 311/312 Hazard Classes | Sudden release of pressure hazard Immediate (acute) health hazard |

Zinc (7440-66-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting 1.0 % (dust or fume only)

Nitrocellulose (9004-70-0)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Copper (7440-50-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on United States SARA Section 313

SARA Section 313 - Emission Reporting 1.0 %

US State Regulations

Zinc (7440-66-6)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

Nitrocellulose (9004-70-0)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List

Copper (7440-50-8)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List

08/24/2018 EN (English US)
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<table>
<thead>
<tr>
<th>Chemical</th>
<th>WHMIS Classification</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Nitroglycerin (55-63-0)</td>
<td></td>
<td></td>
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<tr>
<td>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</td>
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</table>

**Canadian Regulations**

**Small Arms Ammunition – Ballisticlean Rifle & Pistol Ammunition**

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Notes: Explosives are not regulated under WHMIS. They are subject to the regulations of the Explosives Act of Canada.</th>
</tr>
</thead>
</table>

- **Zinc (7440-66-6)**
  - Listed on the Canadian DSL (Domestic Substances List)
  - WHMIS Classification: Uncontrolled product according to WHMIS classification criteria

- **Nitrocellulose (9004-70-0)**
  - Listed on the Canadian DSL (Domestic Substances List)
  - WHMIS Classification: Note: Explosives are not regulated under WHMIS. They are subject to the regulations of the Explosives Act of Canada.

- **Diazodinitrophenol (4682-03-5)**
  - Listed on the Canadian NDLS (Non-Domestic Substances List)

- **Copper (7440-50-8)**
  - Listed on the Canadian DSL (Domestic Substances List)
  - Listed on the Canadian IDL (Ingredient Disclosure List)
  - IDL Concentration 1 %
  - WHMIS Classification: Uncontrolled product according to WHMIS classification criteria

- **Nitroglycerin (55-63-0)**
  - Listed on the Canadian DSL (Domestic Substances List)
  - WHMIS Classification: Note: Explosives are not regulated under WHMIS. They are subject to the regulations of the Explosives Act of Canada.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

**SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION**

Revision date : 08/24/2018
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Alternate Labeling: Packaged ammunition may reflect the following markings and symbols different from information listed in Section 2. These markings and symbols are in response to existing state or national government interpretation as to the hazards posed by small arms ammunition and to firearm usage only. Please note Ballisticlean Centerfire Rifle & Pistol Ammunition contains no lead.

Other Information
This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Party Responsible for the Preparation of This Document
Federal Cartridge Company
900 Ehlen Drive
Anoka, MN 55303
1-800-635-7656

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.